

Claims:

1. A method of improving the ignitability and burn rate of aluminium fuel particles,
5 c h a r a c t e r i s e d in that the aluminium fuel particles are treated with an aqueous solution of hydrofluoric acid and a fluoride and/or complex fluoride of an alkali metal and/or alkaline earth metal to form a surface layer of a fluoride complex bound to the aluminium fuel particles.
- 10 2. A method as claimed in claim 1, c h a r a c t e r i s e d in that an alkaline earth metal ion is added to the aqueous solution in the final stage of the treatment.
3. A method as claimed in claim 1, c h a r a c t e r i s e d in that the alkali metal fluoride is selected among sodium, potassium, rubidium and cesium fluoride.
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4. A method as claimed in claim 1, c h a r a c t e r i s e d in that the complex fluoride is a hexafluoroaluminate or hexafluorosilicate.
5. A method as claimed in claim 1, c h a r a c t e r i s e d in that the alkali
20 metal fluoride is sodium fluoride and the fluoride complex is cryolite.
6. A method as claimed in claim 1, c h a r a c t e r i s e d in that the alkali metal fluoride is potassium fluoride and the fluoride complex is tripotassium hexafluoroaluminate.
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7. Aluminium fuel particles for use in propellant and explosive compositions and pyrotechnic charges, c h a r a c t e r i s e d in that the fuel particles have a surface layer of a fluoride complex provided by treatment of aluminium particles with an aqueous solution of hydrofluoric acid and a fluoride and/or complex fluoride of an
30 alkali metal and/or alkaline earth metal.
8. Aluminium fuel particles as claimed in claim 7, c h a r a c t e r i s e d in that the alkali metal fluoride is selected among sodium, potassium, rubidium and cesium fluoride.
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9. Aluminium fuel particles as claimed in claim 7, c h a r a c t e r i s e d in that the complex fluoride is a hexafluoroaluminate or hexafluorosilicate.

10. Aluminium fuel particles as claimed in claim 7, c h a r a c t e r i s e d
5 in that the alkali metal fluoride is sodium fluoride and the fluoride complex is cryolite.

11. Aluminium fuel particles as claimed in claim 7, c h a r a c t e r i s e d in that the alkali metal fluoride is potassium fluoride and the fluoride complex is tripotassium hexafluoroaluminate.